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## In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

Please amend claims 4, 5, 7, and 31-33 as noted below.

- 1-3. (Canceled).
- 4. (Currently Amended) A method of synthesizing a composition compound, comprising:

  providing a species comprising a nucleoside; and

  reacting the species with a <u>first</u> compound to form a composition second

  compound comprising a structure:

wherein n is at least 2.

- 5. (Currently Amended) The method of synthesizing a composition compound of claim 4, wherein the nucleoside comprises deoxyuridine.
- 6. (Canceled).
- 7. (Currently Amended) The method of synthesizing a composition compound of claim 4, wherein the nucleoside comprises 5-nitro-2'-deoxyuridine.

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8-30. (Canceled).

31. (Currently Amended) A method of synthesizing an amine a nucleotide, comprising: providing a composition first compound comprising a structure:

$$O - \left( \begin{array}{c} O \\ P \\ O \end{array} \right)$$
  $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O \end{array} \right)$   $O - \left( \begin{array}{c} O \\ O$ 

wherein n is at least 2; and

reacting the NH<sub>2</sub> group of the <del>composition</del> <u>first compound</u> with a <u>second</u> compound to form <del>an amine</del> <u>a nucleotide</u> comprising a structure:

$$O \cdot \left( \begin{array}{c} O \\ P \\ O \end{array} \right) \cap \left( \begin{array}{c} O \\ O \\ O \end{array} \right) \cap \left( \begin{array}{c} O$$

 $R^1$  and  $R^2$  each comprising an atom, wherein at least one of  $R^1$  and  $R^2$  comprises a carbon atom.

32. (Currently Amended) The method of synthesizing an amine a nucleotide of claim 31, wherein at least one of R<sup>1</sup> and R<sup>2</sup> comprises a fluorescent entity.

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33. (Currently Amended) The method of synthesizing an amine a nucleotide of claim 31, wherein at least one of R<sup>1</sup> and R<sup>2</sup> comprises a radioactive entity.

34-48. (Canceled).